TI2410en	**Product Information**	thermokon asia pacific
GRW1- Series (PM)	**Air Quality (Fine Dust, PM2.5 or PM10) Room Sensor with Active Output**	

The GRW1- Series (PM) is designed to measure fine dust concentrations (PM2.5 or PM10)

in rooms or areas

Available with or without display

The Sensor outputs are 0…10V and 4…20mA

The sensor operates with low power supply

The sensor outputs are active

Use

Compatible to all common HVAC, DDC and Analog Controls systems, with/without Building Automation System

Air quality (PM) measurements in rooms or areas

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active outputs

Sensor Outputs 0….10V and 4…20mA

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

Product Range

Order Code	Power Supply	Measuring Range	Sensor Output	Display	Protection
GRW1.RE	AC/DC 24V (±10%)	PM 2.5 0…500 µg/m3	0…10V and 4…20mA	n/a	IP20 to IEC60529
GRW1.TE		PM 10 0…600 µg/m3			
GRW1.SE		PM 2.5 0…500 µg/m3		LCD Display	
GRW1.UE		PM 10 0…600 µg/m3			

Sensor Specification	Sensor Specification	Measured	PM2.5 or PM10
		Sensor Characteristics	Active
		Sensor Output (s)	0…10V and 4…20mA
		Resolution	1 µg
		Response time	<10sec.
		Accuracy	±10% of reading
		Measuring Range (s)	0..500µg/m or 0..600µg/m3
Technical Information	Electrical Information	Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Load Resistance	≤500Ω, (4…20mA output)
		Load Resistance	≥2000Ω,(0…10Output)
		Terminal Clamp	Screw terminal, max. 1.5mm²
		Power Consumption	24V; 1.2W / 2.2VA
	Mechanical Information	Cable Entry	ø23mm on the backside
		Sensing Element Position	Inside the housing
	Color and Materials	Housing Cover	White ABS
		Housing Bottom	White ABS
		Display GRW1.SB	LCD display with backlight
	Environmental Conditions	Operation Temperature	0ºC...+50ºC
		Operation Humidity	<85% r.h., no condensation
		Transport Temperature	-35ºC...+70ºC
		Transport Humidity	< 90% r.h.
		Storage Temperature	-10ºC...+70ºC
		Storage Humidity	< 85% r.h., no condensation
	Norms and Directives	IP- Rating	IP20 to IEC60529
		Safety Class	III to EN 60 730
		Product Standard 1	Automatic Electric. Controls for household and similar use
		Product Standard 2	2009/EN 60 730-1
		CE Conformities to	2004/108/EG Electromagnetic Compatibility EMV
		CE Electromagnetic Compatibility Emitted Interference	2000/EN60730-1 Emitted Interference
		CE Electromagnetic Compatibility Interference resistance	2000/EN60730-1 Interference Resistance
		RoHS Compatibility	RoHS 3, Directive 2015/863
		Operation Climatic Condition	IEC 60 721-3-3
		Operation Mechanical Condition	IEC 60 721-3-2 to class2M2
		Transport to Climatic Condition	IEC 60 721-3-2
		Transport Mechanical Condition	IEC 60 721-3-2 to class2M2
		Storage Climatic Condition	IEC 60 721-3-1
		Storage Mechanical Condition	IEC 60 721-3-1 to class2M2
Miscellaneous	Accessories	n/a	n/a
	Shipping & Handling	Minimum Order	1 box with 1 piece
		Package Material	Rigid Cardboards
	Order Notes	Order Code	e.g. GRW1.SB

Advices

Installation Note

Caution

Observe the following general regulation for engineering and implementation:

All relevant national and heavy power regulation

Other country specific regulations

Country-specific regulations

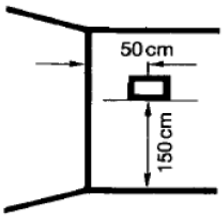
Local electrical supply authority regulation

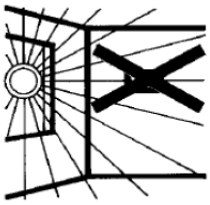
Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge

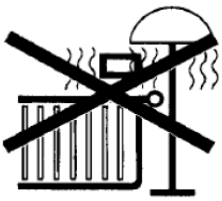
Third party specifications, e.g. general contractors or constructors

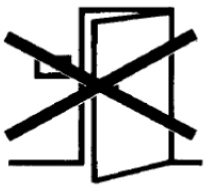
Mounting Advice

Caution









Disposal Notes

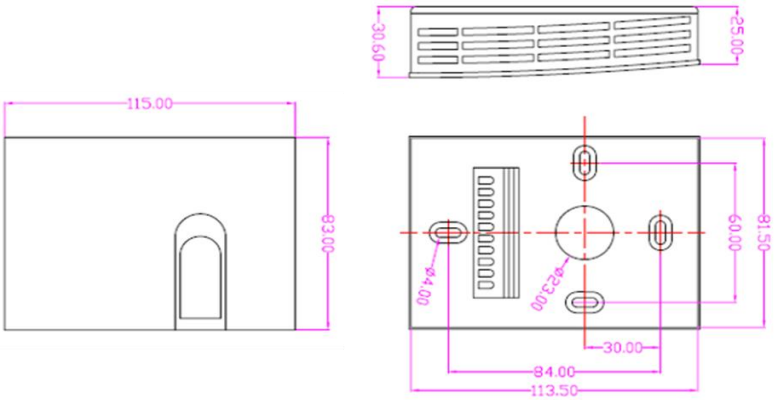
The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.

The device may not be disposed as domestic garbage.

The device must be disposed through channels provided for this purpose.

It is mandatory to complying with local currently applying laws and regulations.

Connection

Power Supply		Sensor Outputs	
UB+ 24V AC/DC	Ground	0...10V (PM)	4...20mA (PM)
T1	T2	T3	T4

Connections